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Document Version

Publisher's PDF, also known as Version of record

Publication date:

2002

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Garretsen, H., Lensink, R., & Sterken, E. (2002). *Growth, financial development, societal norms and legal institutions*. s.n.

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Growth, Financial Development, Societal Norms and Legal Institutions^{*}

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April 2002

Abstract

This paper analyses whether societal norms help to explain cross-country differences in financial development. We analyze whether societal norms in addition to legal institutions have an impact on financial development. We address the implications of the inclusion of societal norms for the analysis of the impact of financial development on economic growth. Our main conclusions are first that societal norms are relevant in determining stock market capitalization while this is not the case for bank credit. Second, the value added of including informal institutions is limited to the extent that their (in)significance in determining financial development or, indirectly, economic growth largely coincides with that of formal institutions

JEL: G15, K4, Z1

* We would like to thank Ross Levine, Radislav Seminov and seminar participants at Emory University and the University of Nijmegen for useful comments on an earlier version of (parts of) this paper.

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1 Introduction

In recent years there has been a renewed interest in the old debate on the relationship between financial development and economic growth. A central issue in this literature has always been whether stock markets or banks are more appropriate to promote economic growth. Nowadays proponents of the so-called legal view of financial development argue that the distinction between a bank and a market-based financial system is as such irrelevant. For instance, Levine (1998, 2000, 2001) and Levine, Loayza and Beck (2000), using cross-country data from La Porta, Lopez-de Silanes, Shleifer and Vishny (LLSV hereafter, 1997, 1998) on differences in corporate law, regulation and law systems, show that it is much more important to establish a legal environment in which financial systems can operate efficiently. More in general, the legal or view argues that only that part of financial development that is related to the legal institutions is important for economic growth.

In this paper we examine whether one should not only look at formal institutions but in addition also take informal institutions like societal norms into consideration. We consider societal norms as possible additional determinants of financial development and we thereby investigate whether informal institutions together with formal institutions are relevant in explaining cross-country differences in financial development and its effect on economic growth. We certainly do not try to come up with a definite answer to the relevance of societal norms for financial development. We merely want to point out, assuming that institutions are thought to be relevant for financial development, whether it may be worthwhile to include informal institutions, like societal norms, alongside formal institutions.

This paper is organized as follows. In the next section we clarify why it may be relevant to consider societal norms in explaining financial development. In Section 3, we examine to what extent a cross-country classification based on societal norms differs from a classification based on legal indicators. This gives us information about possible societal differences and similarities between and within legal origin groups. In Section 4 we present estimation results concerning the relevance of societal norms and legal rights in explaining stock market and banking development. In section 5 we investigate the relevance of these norms, together with legal institutions in explaining the relevance of the (exogenous part of) financial development for economic growth. Section 6 summarizes and concludes.

2 Why would one consider societal norms?

Societal norms are meant to measure international differences in culture. Culture is defined to be the collective programming of the mind, which distinguishes the members of one group or category of people from another. Culture is learned, not inherited. Cultural differences manifest themselves in various ways. The deepest

manifestation of culture is the set of values. Values are broad tendencies to prefer certain states of affairs over others. Norms are the standards for values that exist within a group or category of people. More superficial differences in culture can be found in symbols and rituals. They are at the core of economic behavior and might explain differences in financial development and partly complement (or substitute for) the effect of legal indicators.

A first argument to study societal norms in addition to legal indicators comes from the interest of other studies in this field. Berglof and Von Thadden (1999) argue that countries can develop other institutions for stopping expropriation, such as moral sanctions or worker participation in management. Rajan and Zingales (2000) stress the role of the political structure rather than specific legal rules in explaining differences in the degree of investor protection. If other institutions than the ones emphasized in the LLSV-work matter, countries might be classified wrongly if the classification is solely based on the legal indicators as suggested by LLSV and it is here that the potential relevance of informal institutions comes to the fore. The Netherlands, for instance, is classified in the French legal origin group and show indeed weak investor protection. However, The Netherlands has a well-developed financial system and, at least in the 1990s, an above average economic growth performance. As LLSV (1997, pp. 1149-1150) suggest it might be so that trust substitutes for legal institutions. Usually it is argued that societies with a higher trust demonstrate a greater cooperation between agents that meet infrequently. Fukuyama (1995) stresses the need of cooperation between strangers (outside shareowners) for the success of large firms. Putnam et al. (1993) argues that trust is founded in horizontal networking and hindered by vertical hierarchic relationships. Beugelsdijk and van Schaik (2001) test Putnam's (1993) thesis and find evidence for its relevance for a cross-section of 54 European regions. Guiso, Sapienza and Zingales (2000) show for the case of Italy how societal capital is a main determinant of financial development and, based on the work of Knack and Keefer (1997), these authors also report cross-country regressions showing that stock market capitalization to GDP is significantly determined by trust. Inglehart, Basanez and Moreno (1998) give data on trust based on the World Value Survey, which supports the view that in The Netherlands, with a percentage of high trust in people of 56%, as compared to the French legal origin countries with an average of 24.0%, has a high score. Other recent approaches that emphasize the importance of societal norms or, generally speaking, culture when investigating cross-country differences in financial systems are Stultz and Williamson (2001) and Licht, Goldschmidt and Schwartz (2001).

A second argument to study societal norms is more specific with respect to the application of the legal view to the question whether or not financial development stimulates economic growth. In the cross-country growth regressions with some indicator of financial development as one of the explanatory variables, the legal indicators like those in the LLSV data set are used as instrumental variables (IV) in order to be able to isolate the

exogenous part of financial development. This is very important because of the potential endogeneity of financial development in the sense that economic growth might stimulate financial development instead of the other way around. A problem with the IV-approach in general is, however, how to come up with reasonable and sufficiently strong instruments. There is a need for more instruments and particularly more powerful instruments. One way to do this is to exploit the time-series dimension of the data and to go for a panel-estimation. This is what Beck and Levine (2001) and Levine, Loayza and Beck (2000) do. A panel-approach enables the use of lagged values of the explanatory variables as instruments. Another solution is to stick to cross-section estimations and to try to come up with additional instruments. In this paper we will try to show if the inclusion of societal norms as instruments may be a fruitful way of arriving at more and better instruments in a cross-section analysis of the relevance of financial development for economic growth.

3 Societal Norms, Legal Origin and Judicial Rules

Societal norms and legal origin

The societal indicators we use are from Hofstede (1980). The reason to use these data is simply that they are widely used in research on culture and economics. This study consists of survey data about the values of people working in local subsidiaries of IBM in more than 50 countries and defined four problems common in all answers:

1. Societal inequality, including the relationship with authority;
2. The relationship between the individual and the group;
3. Concepts of masculinity and femininity;
4. Ways of dealing with uncertainty (again including aggression and emotion).

The actual surveys used in Hofstede (1980) date back to 1968. Updates and extensions of this first survey have re-affirmed its main conclusions (see notably Hofstede, 1991). The fact that the data are now more than 30 years old is not a main concern under the assumption that culture changes very slowly over time and most likely not at all in a time span of just a few decades. Another main reason to use these data is that they pertain to *general* features of culture for the 50 countries in the sample. This suits our research objective since we don't want to look into norms that are specific for financial markets or the stock market in particular. Instead we want to emphasize the role of societal norms that are more general and hence not specific to certain markets or transactions (see Licht et al., 2001 for a similar observation).

On the basis of the concepts 1-4, Hofstede defines the following “societal” indicators:¹

¹ A description of the survey questions, on which the indices were constructed, can be obtained on request.

1. *PDI*: **Power distance** is defined as the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally. It measures to a certain extent societal inequality.
2. *IDV*: **Individualism** pertains to societies in which the ties between individuals are loose: everyone is expected to look after himself. Collectivism pertains to societies in which people from birth onwards are integrated into groups, which throughout their lives continue to protect them in exchange for unquestioning loyalty.
3. *MAS*: **Masculinity**: this property shows the desirability for assertive behavior against the desirability of modest behavior. It appears that in some societies there are strong differences in answers given by men or women. In the modest countries the differences in gender are weak, but in assertive countries differences are strong.
4. *UAI*: **Uncertainty avoidance** is defined as the extent to which the members of a culture feel threatened by uncertain or unknown situations. It is not risk avoidance: the latter is defined with respect to a certain object. Uncertainty avoidance is more general.

<Insert Table 1 about here>

Table 1 gives the raw data on the societal variables for the 43 countries in our sample. In order to compare scores on the societal norms with a legal clustering, the countries in this table are classified into groups of legal families. The literature distinguishes between common law and civil law countries. The civil law comes from Roman law and relies heavily on legal scholars to formulate its rules, whereas the common law originates from English law and relies on judges to resolve disputes. It is common to further distinguish between French, German and Scandinavian civil law countries. LLSV (1997, 1998) argue that common law countries protect both shareholders and creditors the most. French civil law countries give the least protection, whereas German and Scandinavian civil law countries are somewhere in between.

Table 1 shows that Scandinavian countries score below average on *PDI*, while the French origin countries tend to have a high *PDI*. The lower panel of Table 1 gives *P*-values of a *t*-test on equality of means of sub-samples. A low value indicates a low acceptance of equal means. In the first line the English Common Law countries are compared with the other Civil Law countries. Table 1 shows that the Scandinavian scores on *PDI* are rather different. On the *IDV* indicator the top-scorers are the USA, Australia, Great Britain and Canada. But as a whole the Common Law countries are not so different. As Hofstede shows individualism tends to be correlated with GDP per capita. In our sample *IDV* has a clear negative correlation with the Power Distance (-0.65). If we correlate the *IDV* with legal origin one can observe that Common Law and Scandinavian legal origin countries

tend to show a higher *IDV*-score. The lower part of the Table 1 again gives an indication of equality of means of the various classifications. Although English and Scandinavian countries have high scores they are different in mean. On the masculinity (*MAS*) it appears that Japan is by far the top-rated country, followed by some continental European countries. More modest scores are again for the Scandinavian countries. So one can observe that the Scandinavian origin countries have a relatively low score, while the German origin countries obtain higher scores on average. On the uncertainty avoidance (*UAI*) Greece is on the top of the list, followed by Portugal and Belgium. Low scores are for Singapore and Jamaica. German and French legal origin countries seem to have higher uncertainty avoidance, while Common law countries are typically lower rated. The English and Scandinavian countries are harder to distinguish on this norm. More generally, the p-values indicate that for uncertainty avoidance there is a clear difference between the common and civil law countries, with the former displaying relatively less uncertainty avoidance.

In order to make a further comparison, we cluster the countries according to their societal norms and compare this with the legal families. For our present purposes this clustering is deemed relevant because we want to bring across that societal norms *in general* might matter for financial development. Our goal is not to argue whether for instance *PDI* is more relevant than *IDV*. The societal clustering is based on a Factor Analysis on *PDI*, *IDV*, *MAS* and *UAI*. The Factor Analysis supports the idea that there is one common factor. Its eigenvalue is 1.189 as 0.115 for the next. Also a Principal Component analysis supports the idea of one dominant factor (having the first eigenvalue explaining 45% of the total variance). We use the factor loading to construct a country classification based on societal norms. We use 0.48 as a weight for *PDI*, -0.48 for *IDV*, 0.20 for *MAS* and 0.24 for *UAI*. From these weights a clear negative correlation between *PDI* and *IDV* can be seen. We use the weighted scores to classify the countries in our data set into 5 subgroups. Between parentheses are the scores on the weighted ranking. Finally, these weighted scores enable the construction of the variable FACTOR (which gives the score for each country) and this variable will be used in our estimations in sections 3 and 4.

1. The Nordic countries: Denmark (1), Sweden (2), Netherlands (3), Norway (4) and Finland (10).
2. The Anglo-Saxon countries: Great Britain (5), New Zealand (6), Australia (7), USA (8) and Canada (9).
3. Continental countries: Austria (12), Belgium (17), Germany (13), Italy (14), France (15), Spain (17) as well as the large Latin-American countries Argentina (19) and Brazil (23), as well as Israel (11) and Jamaica (15).
4. Asian culture: India (20), Singapore (21), Hong Kong (22), Turkey (24), Thailand (25), Japan (26), Taiwan (27) and Pakistan (29)
5. A remaining group of countries that show less communality. Chile, Colombia, Egypt, Greece, Indonesia, Jordan, Korea, Morocco, Mexico, Malaysia, Nigeria, Peru, Philippines, Portugal, and Venezuela.

We included Finland in the Nordic group, since its scoring pattern resembles the other Scandinavian countries. Jamaica and Israel show scores very similar to the continental group. Our classification has a clear disadvantage in having a relatively large group of countries that cannot be classified, except from scoring rather extremely on all the societal norms. Table 2 cross-tabulates the societal and legal classifications. From this table it can be seen that the two classifications are rather different, except for the Scandinavian-Nordic matching.

<Insert Table 2 about here>

Licht et al. (2001) also use the Hofstede data and compare these data with the legal origin classification from the work by LLSV, their societal classification of countries corresponds rather well with the one in Table 2. It is also interesting to compare our classification with one that does not start from the Hofstede data. Inglehart et al. (1998, p. 150) uses the World Value Survey to classify 43 societies/countries along two key values. The two key dimensions are:

- Traditional authority versus secular-rational authority. Is there obedience to a traditional authority, or is authority legitimated by rational-legal norms?
- Survival values versus well-being values. Is there a shift from scarcity norms, emphasizing hard work and self-denial, to quality of life?

These two dimensions clearly give a clustered group of Scandinavian countries plus the Netherlands, Anglo-Saxon countries, Catholic Europe and Latin American countries and Asian countries (as well as Eastern European countries, but these are not included in our sample). This finding strongly correlates with the classification given above in Table 2 indicating in our view that both classifications may be proxies for the same underlying factors.

Societal norms and shareholder rights

So far our analysis is based on a fairly general comparison between legal families and societal norms. We proceed by examining whether a clustering on societal norms corresponds to differences in explicitly specified shareholder rights. The shareholder rights are from LLSV (1998). For the sake of comparison we closely follow the LLSV set-up, so we distinguish:

- **ONE: One share-one vote:** equals 1 if it is not allowed to separate voting rights from dividend rights.
- **PROXY: Proxy voting by mail** allowed: is 1 if so.
- **BLOCK: Shares blocked before the shareholder meeting:** is 1 if law does not require depositing shares several days prior to the meeting to avoid trade.
- **VOTE: Cumulative voting for directors:** some countries allow cumulative voting for directors, which gives more power to minority shareholders, is 1 if cumulative voting is allowed.

- *OPP: Oppressed minority*: give minority shareholders legal mechanisms to be used against perceived oppression, is 1 these mechanisms exist.
- *PRE: Preemptive rights to new issues*: is 1 if so;
- *PERC: Percentage of capital needed* to call an extraordinary shareholder. The higher this percentage the lower the legal protection. We use a dummy variable: if PERC is less or equal than 10%, the dummy variable equals 1.
- *ANTI: Anti-director rights*: summation of *ONE*, *BLOCK*, *VOTE*, *OPP*, *PRE* and *PERC*.
- *MAND: Mandatory dividend*: some law code requires distribution of a minimum dividend percentage.

<Insert Table 3 about here>

Table 3 presents scores on the shareholder rights indicators and examines whether shareholder rights variables are statistically significantly different between clusters based on societal norms. LLSV have examined whether shareholder rights indicators are statistically significantly different between legal families (see in particular LLSV, 1998, pp. 1130-31). On the basis of this analysis LLSV conclude that common law countries protect shareholders better than civil law countries. It is noteworthy that our classification gives at least the same percentage of differences between subgroups as the LLSV legal classification does. LLSV find on the 10 percent significance level for 31 of the 63 comparisons a significant difference in mean. We compare 90 means and find 38 significant differences at the 90 percent confidence level. The distribution over the indicators is about the same as for the legal classification. We do not find significant differences in the “Preemptive Right to New Issues”. The most pronounced differences are found in “Proxy by Mail” and “Shares not Blocked Before Meeting”. The Anglo-Saxon group is more homogeneous than the Common Law countries; the same holds for the Nordic group as opposed to the Scandinavian group, but to a lesser extent. The distinction between the Anglo-Saxon and the Common Law group becomes stronger as it concerns the anti-director rights. To conclude, the societal classification leads to heterogeneity between subgroups with respect to shareholder rights that is comparable to the legal origin classification. Licht et al. (2001) reach a similar conclusion when they estimate the impact of the individual Hofstede-variables on the anti-director rights variable claiming that the path-dependency of culture is so strong that one must look upon legal institutions such as anti-director rights as being determined by the cultural variables.

A main conclusion is therefore that although the differences in shareholder protection might to a large extent be related to legal origin, our calculations show that societal norms might as well explain (part of) the differences. If societal differences are able to explain differences in shareholder rights they might also indicate other differences in attitudes that can be relevant to stock market development. It can be the case that a high trust

country does not strive for sharp legal institutions to cover the weak spots of financial contracting. Sometimes this leads to differences in insights. The Netherlands, officially belonging to the French legal origin class, truly behaves like a Nordic country. The Asian Common Law countries show different legal institutions with respect to shareholder rights compared to the Big-5 Common Law countries. Although they adopted the British legal system, other societal norms typically make them different. These findings support the idea that it is worthwhile to analyze the role of societal norms (alongside with the legal variables) in explaining stock market development.

Societal norms and creditor rights

Table 4 confronts our clustering of countries based on each country's weighted score from our Factor Analysis with the country-specific creditor rights. These creditor rights are found to be significant (Levine, 1998) when it comes to explaining cross-country variations in the other main component of financial development, banking development. As with shareholder rights, our data on creditor rights are taken from LLSV (1998), so we can distinguish:

- **RES: Restrictions for Going into Reorganization**, equals 1 if reorganization procedures imposes restrictions, such as creditors consent, to file for reorganization
- **AUTO: No Automatic Stay on Assets**, equals 1 if the reorganization procedure does not impose an automatic stay on assets on the firm's assets.
- **SEC: Secured Creditors First Paid**, equals 1 if secured creditors are ranked first in the distribution of the proceeds in case of bankruptcy
- **MAN: Management Does Not Stay in Reorganization**, equals 1 if this is the case
- **CRED: Creditor Rights**, index aggregating the 4 aforementioned creditor rights, index ranges from 0 to 4.
- **LEG: Legal Reserves required as Percentage of Capital**, minimum % of total share capital mandated to avoid dissolution of the firm, equals 0 if there is no such restriction

<Insert Table 4 about here>

In a similar vein as Table 3, Table 4 gives the individual country scores on creditor rights and the classification of countries according to societal origin. Based on their legal origin classification LLSV (1998, pp. 1136-1137) find significant differences between the creditor rights especially between common law and civil law countries (with higher scores on creditor rights for the former group of countries). The same holds for differences between English- and French legal origin countries. Differences between English and the German or Scandinavian legal origin countries are much smaller and mostly not significant. This last conclusion holds more or less also for the differences in creditor rights based on our classification of countries based on societal origin (though the

similarity is less compared to shareholder rights). Only for the Asian group (see for instance the scores on the composite *CRED* variable) there is a significant difference with the other groups of countries (typically the Asian countries have relatively higher scores on creditor rights). In the LLSV set-up, most of these Asian countries are included in the legal English-origin group, which explains the higher scores for this group in their analysis compared to our societal Anglo-Saxon-origin group in Table 4.

4 Stock market and banking development and societal norms

In this section we present estimation results concerning the relevance of legal indicators and societal norms for stock market development and banking development. These regressions are thus meant to illustrate whether it might be worthwhile to look at informal institutions like our societal norms when one wants to explain (cross-country differences in) financial development by means of (cross-country differences in) institutions. To this end we look at one indicator for stock market development and one indicator for banking development:²

- **MCAP: stock market capitalization**, as a measure of the size of the stock market defined as the value of listed domestic shares on domestic stock exchanges divided by GDP;
- **BPY: bank credit**, stock of credit by commercial and deposit-taking banks to the private sector divided by GDP.

The reason to pick these indicators is simply that they are widely used in the recent literature on financial development and economic growth. Data for these indicators are taken from the data-set provided by Levine and Zervos (1998). The data refer to the period 1976-1993.

We concentrate on the impact of both legal variables and societal norms on stock market development. In the base model we control for the log of real output per head in 1976, the initial year in our sample (*LRGDP*), average annual output growth during 1976-1993 (*GYP*) and an enforcement variable called “efficiency of the judicial system” (*EFJS*). By including these variables in our basic specification we actually replicate the specification used by LLSV (1997, pp. 1134-1135, p. 1141).³ We estimate 3 models for *MCAP* and *BPY*. In Tables 5A and 5B the six corresponding regressions can be found in the various columns. The difference between these two tables is that in Table 5A we use the 4 individual Hofstede variables whereas in Table 5B we

² We have also tested the relevance of societal indicators for an alternative measure for stock market development, **total value traded** (*TVT*). Although results were not exactly the same as for *MCAP*, the main conclusion also holds for *TVT*: societal norms are important for explaining stock market development. The results for *TVT* can be obtained on request.

³ We do not include other indicators for enforcement (presented in LLSV) since the different enforcement indicators are highly collinear. It should be noted that we have also tested whether our classification based on societal norms gives significantly different means with respect to “Efficiency of the Judicial System” (*EFJS*). It appears that differences between subgroups are considerable. These results are not presented for reasons of space. The *EFJS* variable ranges from 0 to 10, which higher scores representing a more efficient judicial system.

use the variable *FACTOR*, which results from our Factor Analysis upon which the section 2 (recall Tables 3 and 4) was largely based. The set-up of Tables 5A and 5B is the same. In the first estimation (columns 1 and 4) we include *ANTI* (or *CRED*) and *EFJS*. These estimates represent the legal view. In the second estimation (columns 2 and 5) we include the proxies for the societal norms, respectively the 4 Hofstede-variables in Table 5A and the variable *FACTOR* in Table 5B. In the third set of regressions (columns 3 and 6 in both tables) we include both the formal legal indicators and the societal norms. The three models for *MCAP* and *BPY* do not cover all the possible combinations between all the variables, but they highlight the most important results.⁴

<Insert Tables 5A and 5B about here>

Before we discuss the results a few words on the expected signs of the parameters is relevant. We expect from previous results that legal protection of investors and enforcement will increase stock market development and banking development. So the effect of anti-director rights (*ANTI*), efficiency of the judicial system (*EFJS*) and the creditor rights (*CRED*) should have positive signs. For the societal norms these signs are more ambiguous and we certainly do not want to claim too much here. The main point is that these norms do seem to be relevant in explaining stock market capitalization *MCAP*. The precise impact as such is certainly left for future research. Countries with a low Power Distance Indicator (*PDI*) for instance apparently will show a larger trust, since there is more value in horizontal relationships. A higher trust could therefore be looked upon as making the development of a stock market less necessary, so a higher *PDI* (lower trust) could be thought of as to go along with a more pronounced stock market development. Note, however, that Guiso, Sapienza and Zingales (2001) argue that trust enhances stock market development. A higher individualism (*IDV*) should have a positive impact (*ceteris paribus*) on stock market development. Individualism points at the efficiency of a market as a coordinating device. The sign of *MAS* is less clear even though Licht et al. (2001), following Hofstede himself, emphasize that more masculinity “is compatible with equipping all shareholders with the rights and means to determine their position” (p. 27) which suggest that in more masculine societies stock markets are more developed. Finally, Uncertainty Avoidance (*UAI*) might be thought of as being negatively correlated with stock market development to the extent that compared to for instance bank deposits, stocks are perceived as a more risky investment (see De Jong and Semenov (2001) for this view). But one could also argue that stock markets provide both insurance and risk-seeking opportunities. As with *MAS* the sign of *UAI* is less clear therefore,

⁴ Note that we also ran regressions in which, in the case of *MCAP*, the composite shareholders rights variable *ANTI* (or, in the case of *BPY*, its equivalent *CRED*) is replaced by the legal origin variables. Since a number of the legal origin variables are highly correlated with *ANTI* and *CRED* we have not included these variables simultaneously. Notably for the variables English legal origin and French legal origin there is a clear correlation with anti-director rights as well as with creditor rights. For the English legal origin there is a clear positive

which is a main reason to also include the results for the factor analysis as a composite measure of societal norms. In any case we need to be careful in directly interpreting the parameters, since a factorization of the 4 societal norms into one variable makes sense, and at least two of the indicators, *PDI* and *IDV*, are correlated as was explained in section 3. We therefore include all four variables simultaneously in the model in Table 5B and by means of the variable *FACTOR* analyze the joint contribution.

Table 5A, column 1, shows that anti-director rights (*ANTI*) has a clear positive impact on market capitalization. More importantly, columns 2 and shows that market capitalization is significantly affected by the societal variables (compare with the fit of the model in column (1)). *PDI* can be looked upon as being negatively correlated with trust and the positive coefficient for *PDI* thus suggests (as opposed to Guiso et al., 2001) that less trust goes along with a higher degree of stock market capitalization. Similarly, we find that a higher degree of uncertainty avoidance goes along with a lower degree of stock market capitalization. The conclusion from the first 3 columns of Table 5A is that societal variables like the 4 Hofstede-variables are potentially important in explaining stock market development, here measured by stock market capitalization (*MCAP*). Given our previous observation that there is a common factor in these 4 variables, we put at least as much weight to the estimation results reported Table 5B. Here we also see that the societal norms, here jointly presented in the variable *FACTOR*, contribute significantly to stock market capitalization.

Additional evidence (not shown here) supports this conclusion. First, when we use legal origin instead of anti-director rights in our regressions we also find that the societal norms are significant. Second, as we explained in section 3, it is possible to use the Hofstede-variables to classify countries into 5 subgroups.. When we use the 5 subgroups or the common factor itself instead of the underlying Hofstede variables we also find that these variables have a significant impact on *MCAP* and that the fit of the model improves significantly when these variables are included. Thirdly, in a similar analysis Licht et al. (2001) find that the relevance of the societal variables is not due to the use of the Hofstede data but also holds when another well-known data set (the so called Schwartz data set) is used. What is the main conclusion that can be derived from tables 5A and 5B? In our view that societal norms are significant determinants of stock market capitalization but at the same time the inclusion of these norms does not imply that the formal institutions (here, *ANTI* and *EFJS*) are no longer relevant. It thus seems that at least for *MCAP* informal institutions complement formal institutions.

To round up our discussion on the potential relevance of societal norms for financial development, we turn to banking development as proxied by our bank credit variable *BPY*. The basic model is the same as with stock

correlation with both *ANTI* (0.58) and *CRED* (0.55), whereas the corresponding correlation coefficients are negative for French legal origin countries with *ANTI* (-0.45) and *CRED* (-0.54).

marker capitalization except that now we include creditor rights (*CRED*) instead of anti-director rights (*ANTI*). Again, it is difficult to predict beforehand what the sign of the various coefficients for the societal variables should be but we generally expect that variables like power distance or uncertainty avoidance are less important in the case of financial intermediation compared to public capital markets. The estimation results in Table 5A do not only confirm this notion but stronger still none of the societal variables is now significant (see columns (5) and (6)). This is also true (see Table 5B) if we use the composite variable *FACTOR* instead of the 4 individual Hofstede-variables. Note that the insignificance also holds for creditor rights and the efficiency of the judicial system. Additional regressions, not presented for reasons of space, show that the legal origin variables are, however, significant in the *BPY*-regressions.⁵ Also, when (based on section 2) we used the classification of countries into 5 societal subgroups, we did not find a significant effect of these alternative “societal norms” variables on *BPY*. At any rate, legal as well as societal institutions seem to be relatively less relevant for banking than for stock market development. More precisely, both for stock market capitalization and bank credit the inclusion of societal norms do not lead to a different impact of institutions on financial development. In all our specifications we never find that societal norms are significant but that the LLSV-variables are not so (the reverse is not true).

The ultimate question is of course whether these conclusions with respect to banking and stock market development also arise when one analyzes the impact of financial development on economic growth which is what the legal view literature on financial development and economic growth is ultimately about. It is to this issue that we finally turn.

5 Economic growth, financial development and societal norms

In this section we want to find out, using the variables and specifications of the previous section as our starting point, if the extension of the legal view with our societal norms leads to different conclusions compared to the case when these norms are not included. To this end we present cross-section growth regressions in which, besides a set of conditioning variables, the financial indicators *MCAP* or *BPY* are the main explanatory variables in the growth equation. In addition, and in line with legal view literature we consider *MCAP* and *BPY* to be *endogenous* variables and this gives us a second equation that needs to be estimated and in which *MCAP* or *BPY* are a function of the variables specified in the previous section. In fact, the three basic specifications that we use in this section in estimating *MCAP* or *BPY* are the same as those in Tables 5A and 5B. To deal with the endogeneity we estimate the system of two equations by 3SLS and use instrumental variables where the set of

⁵ Levine (1998, p. 604) concludes that *CRED*, *EFJS* or legal origin are significant determinants of bank credit. His specification differs however from those in columns (1) and (4) of Tables 5A,B and our main point here is not that the LLSV-variables are never relevant in explaining bank credit (since we also came up with specifications in which they are significant) but instead we want to emphasize that for *BPY*, and clearly opposed to *MCAP*, we were not able to discern a significant impact for societal norms in any specification.

instruments consists of the set of conditioning variables and, depending on the specification used, the LLSV-variables and/or our societal norms. For the latter we use the variable *FACTOR* in order to minimize the probability of overidentification.

This set-up of our cross-section growth regressions is standard in the legal view literature (see for instance Levine, 1998, p. 605 or Levine, 2000), see Table 6 for further information on the various variables and specifications. Economic growth, *GYP*, is measured as the average annual real per capita GDP growth and the set of conditioning variables (initial output, secondary school enrolment, revolution and coups, the government consumption share of GDP, inflation, and the black market exchange rate premium) are taken from the Levine-Zervos database. All other variables have already been introduced before. We proceeded in three steps and the content of Table 6 reflects these subsequent steps. First, we tested for the endogeneity of the financial variables in the growth equation using the Hausman-test. The results support endogeneity of both stock market capitalization and bank credit to the private sector as a percentage of GDP. Next we estimated the growth regressions based on the above mentioned two equations and using *inter alia* the efficiency of the judicial system *EFJS*, the shareholder rights *ANTI* (or the creditor rights *CRED*) or the societal norms by means of the variable *FACTOR* as instruments. Just as with the estimations in the previous section (see Table 5B) we use 3 main specifications in our growth regressions. The differences between the various specifications are completely due to the variation in the use of the LLSV-indicators and the variable *FACTOR*. Just like in Table 5B, we therefore end up with 6 models, depicted by columns (1)-(6) in Table 6. As a third and final step, through the application of a simple overidentification test we test for all models whether or not the inclusion of the respective LLSV-variables or the variable *FACTOR* among the set of instruments makes sense.

<Insert table 6 here>

The first row of Table 6 gives the results for the endogeneity test. First we estimate the financial indicator on all exogenous model variables (here we vary across our three model specifications for both financial indicators). Next we include the respective residuals in the economic growth regression. The first row of Table 6 gives the estimated parameter of the residual term in the growth equation. A significant coefficient indicates that *MCAP* and *BPY* are indeed endogenous and this turns out to be the case, hence the use of instruments is called for. Indeed, and not surprisingly, we have to reject exogeneity of both *MCAP* and *BPY*. The next step concerns the growth regressions (estimating in each of the six cases a set of two equations, one for *GYP* and one for *MCAP* (*BPY*)). Rows (3)-(8) in table 6 give the most important results. In each case we report the estimated parameters of *MCAP* or *BPY* in the growth equation and the coefficients for the corresponding LLSV-variables or *FACTOR*, the societal norms variable, in the equation for *MCAP* or *BPY*. It turns out that (the exogenous part of) stock

market capitalization is not important for economic growth whereas (the exogenous part of) bank credit significantly determines economic growth. While these are interesting results, they are not our prime concern here. Instead, we want to focus on the comparison of the results for each of the three models for *MCAP* and *BPY*. Two findings stand out. First, just like in Table 5A societal norms are significant in the models for *MCAP* and not for *BPY*. *But in all 6 models it is also the case that the impact of FACTOR is very much alike that of the formal institutions, ANTI (CRED) and EFJS.* If the latter variables are (in)significant so is *FACTOR* and the inclusion of *FACTOR* never leads to different conclusions with respect to the impact of (the exogenous part of) our two financial indicators on economic growth. Just like in the previous section we are therefore led to conclude that the inclusion of societal norms does not lead to different insights compared to the case where only formal institutions (here *ANTI (CRED)* or *EFJS*) are looked at.⁶ Finally, row (10) of Table 6 gives the results for a test on the appropriateness on including *ANTI (CRED)* or *FACTOR* in the three model specifications upon which Table 6 is based. We tested for overidentification as follows. We have two sets of instruments: a limited one *Z* and a broad one *W* (including *Z* and the candidate additional instruments). First we estimate *MCAP* or *BPY* on *Z* and retrieve the fitted values. Next we estimate the economic growth equation on all determinants and the fitted values of the auxiliary equation. We use an F-test to compare the Sum of Squared Residuals (SSR) of this model with the SSR of the unrestricted model that uses *W* as instruments using (see also McFadden, 1999). This F-test is equivalent to overidentification test in GMM-models. A relatively low coefficient in row (10) means that (the) addition of the respective instrument(s) becomes more valid because the instruments are then more relatively more powerful. We are especially interested in the value added of including *FACTOR* in the list of instruments. Table 6 shows that *CR* is a rather poor instrument in the model with *BPY* (as one can also observe from the Hausman-test for Model 4). Adding our composite societal norms variable *FACTOR* to the model contributes both to the endogeneity and the explanation of economic growth. Adding both *FACTOR* and *CR* does not improve these results though. It should be noted that the overidentification test still indicates weakness of the instrument set as a whole. For *MCAP* we observe that *ANTI* is a better instrument than *FACTOR*. All in all, the results of our overidentification tests indicate that the power of the instruments *ANTI (CRED)* and *FACTOR* is rather limited.

⁶ This conclusion is reinforced through our growth regressions in which *MCAP* and *BPY* were included in the same growth regression either as two independent variables (like in Levine and Zervos, 1998 or Levine, 2001) or as one composite variable “financial development” (=MCAP+BPY, like in Levine, 2000). In all cases we found that the impact of growth regressions with societal norms as instruments is similar results to that of regressions with only the LLSV-variables (and not the societal norms) in the list of instruments.

6 Conclusions

Using the examples of stock market capitalization and bank credit, we have analyzed the potential relevance of societal norms in explaining financial development and the impact of financial development on economic growth. Our starting point was the observation that the recent legal view literature on financial development and economic growth might take too narrow a view of the role of institutions and that informal institutions are perhaps unduly neglected. We first showed that the classification of countries according to their legal institutions with respect to the protection of shareholders and creditors is to a considerable extent similar to the classification of countries based on societal norms. There are, however, also notable differences between the classification when one looks more closely at various specific legal and societal indicators or looks more closely at individual countries like the Netherlands. This comparison led to an analysis of the relevance of societal norms in addition to as well as separate from that of the legal institutions on stock market capitalization and bank credit and also on economic growth. Based on our composite indicator for societal norms we find that societal norms are a significant determinant of stock market capitalization but not of bank credit. In particular we find that the impact of societal norms is very similar to that of the legal institutions. Compared to the latter, the value added of societal norms seems to be rather small when it comes to understanding the role of institutions at large for financial development. In our growth regressions we find that the exogenous part of stock market capitalization is not significant, but that of bank credit is significant for economic growth. But again, the way that societal norms (now in their role as an instrumental variable) enter growth regressions is similar to that of the legal institutional variables. Also, as is often a problem in cross-section regressions, the power of both societal norms and legal institutions as instruments is not very strong. In the end we find societal norms to be largely interchangeable with the legal variables (or the latter to perform better). The usefulness of including societal norms alongside the legal institutions is found to be limited not only when it comes to their impact on financial development and economic growth but thus also where it concerns the search for powerful instruments in the growth regressions.

References

- Beck, T., Levine, R., Loayza, N., 2000. Finance and the sources of growth. *Journal of Financial Economics*, 58, 261-300.
- Beck, T., Levine, R., 2001. Stock markets, banks, and growth: correlation or causality. Mimeo, Carlson School of Management, University of Minnesota, Minneapolis.
- Berglof, E., Von Thadden, E.-L., 1999. The changing corporate governance paradigm: implications for transition and developing countries. Stockholm Institute of Transition Economies, Stockholm.
- Beugelsdijk, S., Van Schaik, T., 2001. Social capital and regional economic growth. *CENTER Discussion Paper 2001-102*, Tilburg.
- Fukuyama, F., 1995. *Trust*. Free Press, New York.
- Guiso, L., Sapienza, P., Zingales, L., 2001. The Role of Societal Capital in Financial Development. Mimeo, University of Chicago.
- Hofstede, G., 1980. *Culture's Consequences: International Differences in Work-Related Values*. Sage Publications, Beverly Hills.
- Hofstede, G., 1991. *Culture and Organizations*. McGraw-Hill, Maidenhead.
- Inglehart, R., Basanez, M., Moreno, A., 1998. *Human Values and Beliefs: A Cross-Cultural Sourcebook*. University of Michigan Press, Ann Arbor.
- Inkeles, A., Levinson, D.J., 1969. National character: the study of modal personality and sociocultural systems, in: Lindsey, G., Aronson, E. (Eds.), *The Handbook of Societal Psychology*, 2nd edition, vol. 4. Addison-Wesley: Reading.
- Jong, de E., Semenov, R., 2001. Cross-country differences in stock market capitalisation: a cultural view. Mimeo, University of Nijmegen.
- Knack, S., Keefer, P. 1997. Does societal capital have an economic pay-off?: a cross-country investigation. *Quarterly Journal of Economics*, 112(4), 1251-1288.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R.W., 1997. Legal determinants of external finance. *Journal of Finance*, 52, 1131-1150.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R.W., 1998. Law and finance. *Journal of Political Economy*, 106, 1113-1155
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R.W., 1999. The quality of government. *Journal of Law, Economics, and Organization*, 15, 222-279.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R.W., 2000. Investor protection and corporate governance. *Journal of Financial Economics*, 58, 3-27.
- Levine, R., 1998. The legal environment, banks, and long-run economic growth. *Journal of Money, Credit, and Banking*, 30, 596-620.

- Levine, R., 2000. Bank-based or market-based financial systems: which is better?. Mimeo, World Bank: Washington.
- Levine, R., 2001. Napoleon, bourses, and economic growth: with a focus on Latin America, in: Azfar, O., Cadwell, C. (Eds.), *Market Augmenting Government*. University of Michigan Press, Ann Arbor.
- Levine, R., Zervos, S., 1998. Stock markets, banks, and economic growth. *American Economic Review*, 88, 537-558.
- Levine, R., Loayza, N., Beck, T., 2000. Financial intermediation and growth: causality and causes. *Journal of Monetary Economics*, 46, 31-77.
- Licht, A.N., Goldschmidt, C., Schwartz, S.H., 2001. Culture, law, and finance: cultural dimensions of corporate governance laws. Mimeo, Interdisciplinary Center Herzliya/Hebrew University of Jerusalem.
- McFadden, D., 1999. Lecture notes, chapter 4: Instrumental Variables. University of California, Berkeley. http://emlab.berkeley.edu/users/mcfadden/e240b_f01/e240b.html.
- Putnam, R., Leonardi, R., Nanetti, R.Y., 1993. *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton University Press, Princeton.
- Rajan, R.G., Zingales, L., 2000. The great reversals: the politics of financial development in the 20th century. Working Paper, The University of Chicago, Chicago.
- Stultz, R.M., Williamson, R., 2001. Culture, openness and finance. NBER Working Paper, 8222, Cambridge Mass.

Table 1
Societal Norms and Legal Families

Country	PDI	IDV	MAS	UAI
Australia	36	90	61	51
Canada	39	80	52	48
Great Britain	35	89	66	35
Hong Kong	68	25	57	29
India	77	48	56	40
Israel	13	54	47	81
Jamaica	45	39	68	13
Malaysia	104	26	50	36
Nigeria	77	20	46	54
New Zealand	22	79	58	49
Pakistan	55	14	50	70
Singapore	74	20	48	8
Thailand	64	20	34	64
United States	40	91	62	46
<i>English-origin average</i>	53.50	49.64	53.93	44.57
Argentina	49	46	56	86
Belgium	65	75	54	94
Brazil	69	38	49	76
Chile	63	23	28	86
Colombia	67	13	64	80
Egypt	80	38	53	68
Spain	57	51	42	86
France	68	71	43	86
Greece	60	35	57	112
Indonesia	78	14	46	48
Italy	50	76	70	75
Jordan	80	38	53	68

Morocco	80	38	53	68
Mexico	81	30	69	82
Netherlands	38	80	14	53
Peru	64	16	42	87
Philippines	94	32	64	44
Portugal	63	27	31	104
Turkey	66	37	45	85
Venezuela	81	12	73	76
<i>French-origin average</i>	67.65	39.50	50.30	78.20
Austria	11	55	79	70
Germany	35	67	66	65
Japan	54	46	95	92
Korea	60	18	39	85
Taiwan	58	17	45	69
<i>German-origin average</i>	43.6	40.6	64.8	76.2
Denmark	18	74	16	23
Finland	33	63	26	59
Norway	31	69	8	50
Sweden	31	71	5	29
<i>Scandinavian-origin average</i>	31.32	63.52	23.96	47.44
Sample means	57.31	47.17	50.32	64.59
P-values on equal means				
Common versus civil	0.57	0.50	0.22	0.00
English versus French	0.72	0.62	0.13	0.86
English versus German	0.41	0.50	0.36	0.00
English versus Scandinavian	0.00	0.03	0.00	0.68
French versus German	0.06	0.92	0.24	0.76
French versus Scandinavian	0.00	0.00	0.00	0.01
German versus Scandinavian	0.22	0.73	0.20	0.43

Table 2
Societal Clusters and Legal Families

Country	Common Law Origin	French Civil Law Origin	German Civil Law Origin	Scandinavian Civil Law Origin
Denmark	0	0	0	1
Finland	0	0	0	1
Netherlands	0	1	0	0
Norway	0	0	0	1
Sweden	0	0	0	1
<i>Nordic-origin</i>	0.00	0.20	0.00	0.80
Australia	1	0	0	0
Canada	1	0	0	0
Great Britain	1	0	0	0
New Zealand	1	0	0	0
United States	1	0	0	0
<i>Anglo-Saxon-origin</i>	1.00	0.00	0.00	0.00
Argentina	0	1	0	0
Austria	0	0	1	0
Belgium	0	1	0	0
Brazil	0	1	0	0
Germany	0	0	1	0
Spain	0	1	0	0
France	0	1	0	0
Israel	1	0	0	0
Italy	0	1	0	0
<i>Continental-origin</i>	0.11	0.67	0.22	0.00
Hong Kong	1	0	0	0
India	1	0	0	0
Japan	0	0	1	0
Pakistan	1	0	0	0
Singapore	1	0	0	0
Thailand	1	0	0	0

Turkey	0	1	0	0
Taiwan	0	0	1	0
<i>Asian-origin</i>	0.63	0.13	0.25	0.00
Chile	0	1	0	0
Colombia	0	1	0	0
Egypt	0	1	0	0
Greece	0	1	0	0
Indonesia	0	1	0	0
Jordan	0	1	0	0
Korea	0	0	1	0
Mexico	0	1	0	0
Malaysia	1	0	0	0
Nigeria	1	0	0	0
Peru	0	1	0	0
Philippines	0	1	0	0
Portugal	0	1	0	0
Venezuela	0	1	0	0
<i>Other origin</i>	0.14	0.79	0.07	0.00
 <i>Sample average</i>	 0.32	 0.46	 0.12	 0.10
<i>P-values</i>				
Nordic versus Anglo-Saxon	0.00	0.37	1.00	0.02
Nordic versus Continental	0.35	0.11	0.17	0.02
Nordic versus Asian	0.01	0.95	0.13	0.02
Nordic versus Other	0.16	0.04	0.34	0.02
Anglo-Saxon versus Continental	0.00	0.00	0.17	1.00
Anglo-Saxon versus Asian	0.08	0.35	0.17	1.00
Anglo-Saxon versus Other	0.00	0.00	0.34	1.00
Continental versus Asian	0.03	0.02	0.90	1.00
Continental versus Other	0.83	0.56	0.37	1.00
Asian versus Other	0.04	0.00	0.34	1.00

Table 3
Shareholder Rights and Societal Origin

Country	<i>ONE PROXY</i>	<i>BLOCK</i>	<i>VOTE</i>	<i>OPP</i>	<i>PRE</i>	<i>PERC</i>	<i>ANTI MAND</i>		
Denmark	0	0	1	0	0	0	1	2	0
Finland	0	0	1	0	0	1	1	3	0
Netherlands	0	0	0	0	0	1	1	2	0
Norway	0	1	1	0	0	1	1	4	0
Sweden	0	0	1	0	0	1	1	3	0
Nordic-origin	0.00	0.20	0.80	0.00	0.00	0.80	1.00	2.80	0.00
Australia	0	1	1	0	1	0	1	4	0
Canada	0	1	1	1	1	0	1	5	0
Great Britain	0	1	1	0	1	1	1	5	0
New Zealand	0	1	1	0	1	0	1	4	0
United States	0	1	1	1	1	0	1	5	0
Anglo-Saxon-origin	0.00	1.00	1.00	0.40	1.00	0.20	1.00	4.60	0.00
Argentina	0	0	0	1	1	1	1	4	0
Austria	0	0	0	0	0	1	1	2	0
Belgium	0	0	0	0	0	0	0	0	0
Brazil	1	0	1	0	1	0	1	3	0.5
Germany	0	0	0	0	0	0	1	1	0
Spain	0	0	0	0	1	1	1	4	0
France	0	1	0	0	0	1	1	3	0
Israel	0	0	1	0	1	0	1	3	0
Italy	0	0	0	0	0	1	0	1	0
Continental-origin	0.11	0.11	0.22	0.11	0.44	0.56	0.78	2.33	0.06
Hong Kong	0	1	1	0	1	1	1	5	0
India	0	0	1	1	1	1	1	5	0
Japan	1	0	1	1	1	0	1	4	0
Pakistan	1	0	1	1	1	1	1	5	0
Singapore	1	0	1	0	1	1	1	4	0
Thailand	0	0	1	1	0	0	0	2	0
Turkey	0	0	1	1	0	0	1	2	0

Taiwan	0	0	0	1	1	0	1	3	0
Asian-origin	0.38	0.13	0.88	0.75	0.75	0.50	0.88	3.75	0.00
Chile	1	0	1	1	1	1	1	5	0.3
Colombia	0	0	1	1	0	1	0	3	0.5
Egypt	0	0	1	0	0	0	1	2	0
Greece	1	0	0	0	0	1	1	2	0.35
Indonesia	0	0	1	0	0	0	1	2	0
Jordan	1	0	1	0	0	0	0	1	0
Korea	1	0	0	0	1	0	1	2	0
Mexico	0	0	0	0	0	1	0	1	0
Malaysia	1	0	1	0	1	1	1	4	0
Nigeria	0	0	1	0	1	0	1	3	0
Peru	1	0	1	1	0	1	0	3	0
Philippines	0	0	1	1	1	0	1	2	0
Portugal	0	0	1	0	0	1	1	3	0
Venezuela	0	0	1	0	0	0	0	1	0
Other origin	0.43	0.00	0.79	0.29	0.36	0.50	0.64	2.43	0.08
Sample average	0.24	0.20	0.71	0.32	0.49	0.51	0.80	2.98	0.04
P-values									
Nordic vs Anglo-Saxon	1.00	0.02	0.37	0.18	0.00	0.07	1.00	0.01	1.00
Nordic vs Continental	0.35	0.71	0.05	0.35	0.04	0.38	0.17	0.45	0.35
Nordic vs Asian	0.07	0.75	0.99	0.00	0.00	0.29	0.26	0.19	0.35
Nordic vs Other	0.01	0.37	0.95	0.04	0.02	0.25	0.02	0.46	0.09
Anglo-Saxon vs Continental	0.35	0.00	0.00	0.33	0.01	0.21	0.17	0.00	0.35
Anglo-Saxon vs Asian	0.08	0.00	0.35	0.27	0.17	0.30	0.35	0.13	1.00
Anglo-Saxon vs Other	0.01	0.00	0.08	0.69	0.00	0.25	0.02	0.00	0.09
Continental vs Asian	0.24	0.93	0.00	0.01	0.22	0.83	0.62	0.05	0.35
Continental vs Other	0.09	0.35	0.01	0.31	0.70	0.81	0.50	0.87	0.71
Asian vs Other	0.82	0.35	0.60	0.04	0.08	1.00	0.22	0.03	0.09

Table 4
Creditor Rights and Societal Origin

Country	RES	AUTO	SEC	MAN	LEG	CRED
Denmark	1	1	1	0	0.25	3
Finland	0	0	1	0	0	1
Netherlands	1	0	1	0	0	2
Norway	1	0	1	0	0.2	2
Sweden	1	0	1	0	0.2	2
Nordic-origin	0.80	0.20	1.00	0.00	0.13	2.00
Australia	0	0	1	0	0	1
Canada	0	0	1	0	0	1
Great Britain	1	1	1	1	0	4
New Zealand	1	1	0	1	0	3
United States	0	0	1	0	0	1
Anglo-Saxon-origin	0.40	0.40	0.80	0.40	0.00	2.00
Argentina	0	0	1	0	0.2	1
Austria	1	0	1	0	0.1	2
Belgium	0	1	1	0	0.1	2
Brazil	1	0	0	0	0.2	1
Germany	1	1	1	0	0.1	3
Spain	0	1	1	0	0.2	2
France	0	0	0	0	0.1	0
Israel	1	1	1	1	0	4
Italy	1	0	1	0	0.2	2
Continental-origin	0.56	0.44	0.78	0.11	0.13	1.89
Hong Kong	1	1	1	1	0	4
India	1	1	1	1	0	4
Japan	0	0	1	1	0.25	2
Pakistan	1	1	1	1	0	4
Singapore	1	1	1	1	0	4
Thailand	0	1	1	1	0.1	3
Turkey	1	0	1	0	0.2	2
Taiwan	0	1	1	0	1	2
Asian-origin	0.63	0.75	1.00	0.75	0.19	3.13

Chile	1	0	1	0	0.2	2
Colombia	0	0	0	0	0.5	0
Egypt	1	1	1	1	0.5	4
Greece	0	0	0	1	0.33	1
Indonesia	1	1	1	1	0	4
Jordan					0.25	0
Korea	0	1	1	1	0.5	3
Mexico	0	0	0	0	0.2	0
Malaysia	1	1	1	1	0	4
Nigeria	1	1	1	1	0	4
Peru	0	0	0	0	0.2	0
Philippines	0	0	0	0	0	0
Portugal	0	0	1	0	0.2	1
Venezuela			1		0.1	1
Other origin	0.42	0.42	0.62	0.50	0.21	1.71
Sample average	0.51	0.44	0.78	0.37	0.16	2.10
Nordic versus Anglo-Saxon	0.24	0.55	0.37	0.18	0.07	1.00
Nordic versus Continental	0.38	0.38	0.17	0.35	0.96	0.83
Nordic versus Asian	0.50	0.07	0.35	0.00	0.64	0.06
Nordic versus Other	0.16	0.41	0.02	0.01	0.28	0.62
Anglo-Saxon versus Continental	0.62	0.89	0.93	0.33	0.00	0.89
Anglo-Saxon versus Asian	0.48	0.27	0.37	0.27	0.15	0.17
Anglo-Saxon versus Other	0.96	0.96	0.47	0.74	0.00	0.72
Continental versus Asian	0.79	0.22	0.17	0.01	0.64	0.03
Continental versus Other	0.55	0.91	0.43	0.05	0.17	0.78
Asian versus Other	0.39	0.15	0.02	0.28	0.89	0.02

Table 5A: Estimation results for *MCAP* and *BPY* using 4 Hofstede variables

Var\Dep. Var	1: <i>MCAP</i>	2: <i>MCAP</i>	3: <i>MCAP</i>	4: <i>BPY</i>	5: <i>BPY</i>	6: <i>BPY</i>
<i>Constant</i>	-0.4820 (0.2290)	-1.1144 (0.2800)	-1.4947 (0.2810)	-1.2151 (0.0335)	-1.5975 (0.6599)	-2.0028 (0.9157)
<i>LRGDP</i>	-0.0198 (0.0376)	0.0988 (0.0452)	0.1309 (0.0457)	0.1898 (0.0587)	0.2360 (0.0613)	0.2713 (0.0825)
<i>GYP</i>	6.3777 (2.3921)	5.5532 (1.8023)	5.1312 (1.4138)	9.6741 (2.7766)	9.3181 (2.8876)	8.0199 (3.2498)
<i>EFJS</i>	0.0813 (0.0237)	0.0664 (0.0192)	0.0501 (0.0208)	0.0283 (0.0319)	0.0360 (0.0337)	0.0286 (0.0370)
<i>ANTI</i>	0.0501 (0.0210)		0.0618 (0.0164)			
<i>CRED</i>				0.0185 (0.0407)		0.0491 (0.0533)
<i>PDI</i>		0.0051 (0.0019)	0.0061 (0.0018)		0.0013 (0.0034)	0.0027 (0.0041)
<i>IDV</i>		-0.0032 (0.0021)	-0.0035 (0.0019)		-0.0031 (0.0033)	-0.0034 (0.0034)
<i>MAS</i>		0.0029 (0.0015)	0.0028 (0.0013)		0.0024 (0.0031)	0.0022 (0.0031)
<i>UAI</i>		-0.0051 (0.0014)	-0.0045 (0.0011)		-0.0008 (0.0027)	0.0001 (0.0032)
<i>Adj R²</i>	0.5219	0.7088	0.7786	0.5351	0.4944	0.4931
<i>n</i>	41	40	40	42	41	41

White corrected standard errors between parentheses.

Table 5B: Estimation results for *MCAP* and *BPY* using *FACTOR*

Var\Dep. Var	1: <i>MCAP</i>	2: <i>MCAP</i>	3: <i>MCAP</i>	4: <i>BPY</i>	5: <i>BPY</i>	6: <i>BPY</i>
<i>Constant</i>	-0.4820 (0.2290)	-0.8951 (0.3267)	-1.2772 (0.3606)	-1.2151 (0.0335)	-1.6584 (0.5641)	-2.0706 (0.7419)
<i>LRGDP</i>	-0.0198 (0.0376)	0.0028 (0.0346)	0.00413 (0.0373)	0.1898 (0.0587)	0.2137 (0.0619)	0.2601 (0.0852)
<i>GYP</i>	6.3777 (2.3921)	6.3185 (2.5791)	5.7824 (2.2830)	9.6741 (2.7766)	9.6455 (2.6433)	8.0415 (3.1039)
<i>EFJS</i>	0.0813 (0.0237)	0.1127 (0.0257)	0.0926 (0.0239)	0.0283 (0.0319)	0.0493 (0.0286)	0.0367 (0.0319)
<i>ANTI</i>	0.0501 (0.0210)		0.0669 (0.0194)			
<i>CRED</i>				0.0185 (0.0407)		0.0559 (0.0493)
<i>FACTOR</i>		0.0044 (0.0018)	0.0058 (0.0019)		0.0042 (0.0034)	0.0060 (0.0039)
<i>Adj R²</i>	0.5219	0.573	0.597	0.5351	0.5271	0.5323
<i>n</i>	41	40	40	42	41	41

White corrected standard errors between parentheses.

Table 6: Estimation results for growth regressions

	Model 1: <i>MCAP</i>	Model 2: <i>MCAP</i>	Model 3: <i>MCAP</i>	Model 4: <i>BPY</i>	Model 5: <i>BPY</i>	Model 6: <i>BPY</i>
Hausman- test	-0.0494 (0.0254)	-0.0458 (0.0236)	-0.0396 (0.0214)	-0.0972 (0.0631)	-0.0795 (0.0116)	-0.0739 (0.0134)
<i>MCAP</i>	0.0059 (0.0146)	-.00013 (0.0152)	0.0053 (0.0125)			
<i>BPY</i>				0.0723 (0.0240)	0.0051 (0.0278)	0.0543 (0.0159)
<i>EFJS</i>	0.0814 (0.0225)	0.1161 (0.0229)	0.0966 (0.0214)	-0.0071 (0.0103)	0.0501 (0.0329)	-0.0058 (0.0150)
<i>ANTI</i>	0.0508 (0.0246)		0.0679 (0.0235)			
<i>CRED</i>				0.0292 (0.0402)		0.0688 (0.0525)
<i>FACTOR</i>		0.0049 (0.0021)	0.0064 (0.0020)		0.0042 (0.0031)	0.0025 (0.0026)
Overidentifi- cation test (McFadden)	9.109	11.965	8.477	37.974	6.622	9.635
<i>N</i>	41	40	40	42	41	41

-White corrected standard errors between parentheses.

-For an explanation of Hausman-test and Overidentifying-test see the main text, section 4.

-Each of the six models consists of 2 two equations:

$$GYP = c_0 + \beta_1 (FIN) + \beta_2 X; \quad FIN = c_1 + \beta_3 LRGDP + \beta_4 GYP + \beta_5 EFJS + \beta_6 (INSTIT)$$

with (in addition to variables already used before in the paper):

GYP= average real per capita growth; *FIN* is either *MCAP* or *BPY*; *X* is set of conditioning variables (initial output, school enrollment, revolutions and coups, government consumption share of GDP, and the black market exchange rate premium; all from the Levine-Zervos-database); *INSTIT* is combination of *ANTI* (*CRED*), *EFJS* and *FACTOR*. Estimation method: 3SLS.